

## Smart Communications in Transportation Systems

18 June 2009 • Dearborn, Michigan

### ITS, Vehicle Telematics, Infotainment and Avionics ...

Join vehicle manufacturers, radio manufacturers and government representatives in exploring the application of reconfigurable radio to transportation.

Modern transportation systems on air, land and sea make extensive use of radio communications technologies to support vehicle navigation, transportation safety, asset tracking and infotainment. There are a number of technical and business challenges associated with these technologies that are unique to the transportation sector:

**Disparate wireless standards** – Transportation systems often utilize multiple communications standards: GSM, GPRS, 3G, WiFi, WiMAX, DSRC at 5.8GHz and 5.9GHz, GPS, Galileo, NFC, Bluetooth, Satellite, etc. Vehicle manufacturers using traditional radio technologies must embed a separate radio set within the vehicle infrastructure for each supported standard, often at considerable cost, even though only a few of these standards are in use at any given time.

**Regional requirements** – The requirement to support multiple communications standards is compounded when selling and operating vehicles across international boundaries. As technologies evolve, local regulatory requirements on wireless communications as well as regional differences in interpretation of standards and legislated safety requirements can force vehicle manufacturers to support an even wider range of radio configurations for each vehicle model.



**Product life cycles** – Vehicles are typically three years in design and can be in service for ten or more years. Communications technologies, on the other hand, tend to evolve much quicker, with new standards emerging every three to five years. Updating a vehicles communications package to support these evolving wireless standards while the vehicle is in service can lead to significant life time service costs for the vehicle manufacturer.

This workshop will allow vehicle manufacturers and government officials world-wide to come together with leading experts in reconfigurable radio technologies to realize the technical and business advantages offered by SDR and CR technologies in modern transportation systems. Topics included in the workshop will include:

- \* Communications requirements in modern transportation systems
- \* Use cases and business models for SDR and CR in vehicle communications
- \* Radio architectures supporting vehicle communications
  - o Commercial
  - o Broadband
  - o Satellite
  - o RFID
- \* Software download and communications security
- \* Issues associated with safety critical communications

# JOIN US FOR OUR WORKING MEETING

This workshop is being held in conjunction with The SDR Forum's working meeting from June 15th to 18th at the Dearborn Hyatt, in Dearborn, Michigan. This meeting represents the 63rd General Meeting of the Forum and will comprise working sessions advancing the SDR Forum's 2009 operations plan in support of the commercial, public safety, satellite communications, and international tactical radio communities. Groups tentatively scheduled to meet in Dearborn include:

- International Tactical Radio Special Interest Group
- Public Safety Special Interest Group
- Satellite Communications Special Interest Group
- Regulatory Committee
- Cognitive Radio Work Group
- Commercial Baseband Processing Technologies Work Group
- Meta-language for Mobility Work Group
- RF Technologies Task Group
- SCA Work Group
- Security Work Group
- Smart Antenna Work Group
- Test and Measurement Task Group
- Transceiver System Interface Task Group

Another workshop, "Spectrum Sharing of TV Band Devices," will be held June 16th. This workshop will explore the common standards and/or practices for spectrum sharing are needed across otherwise incompatible TVBD communications networks. Highlights of the workshop include a keynote from Paul Kolodzy of Kolodzy Consulting and presentations from representatives of:

- o CogNeA
- o Cognitive Radio Technologies
- o Communications Research Center in Canada
- o Motorola
- o MSTV
- o Shared Spectrum Company
- o Shure
- o TDK
- o Trinity College

An additional meeting highlight includes a plenary presentation given by Rohde & Schwarz on June 17th entitled "Smart-RF" Compensation of Imperfect Analogue RF-Frontend Characteristics by Digital Means in a SDR"

Online registration for the Meeting and Workshop is available at [www.sdrforum.org](http://www.sdrforum.org). Please use the Registration Form to register for the both.

Facility fees for the meeting and workshop are as follows:

On or Before May 15th

Meeting Only Fee (Includes Spectrum Sharing Workshop):

SDRF members: \$275 USD

SDRF non-members: \$375 USD

Workshop Only Fee (per workshop):

SDRF Members: \$150 USD

Non-Member: \$200 USD

Meeting Plus Workshop Fees (includes Both Workshops):

Presenters and SDRF Members: \$400 USD

Non-Members: \$450 USD

After May 15th

Meeting Only Fee (Includes Spectrum Sharing Workshop):

SDRF members: \$325 USD

SDRF non-members: \$425 USD

Workshop Only Fee:

Presenters and SDRF Member: \$175 USD

Non-Member: \$225 USD

Meeting Plus Workshop Fee (includes Both Workshops):

SDRF Members: \$450 USD

Non-Members: \$550 USD

Both the workshop and the general meeting are open to anyone interested in next-generation radio technologies, including non-Forum members.

International visitors to the United States from 'visa waiver' countries must file for travel authorization on-line prior to boarding the aircraft. There is no charge for this service. The application may be found at <https://esta.cbp.dhs.gov/> and more information about the program, including the countries involved, may be found at [http://www.cbp.gov/xp/cgov/travel/id\\_visa/esta/](http://www.cbp.gov/xp/cgov/travel/id_visa/esta/)

[www.sdrforum.org](http://www.sdrforum.org)

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## Meeting location

This workshop will be held in conjunction with the SDR Forum's 63rd Working Meeting at the Dearborn Hyatt, in Dearborn, Michigan.

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Rate: \$107, use code G-SDRF  
Reservation Deadline: 1 June  
Limited rooms available, so reserve early.  
For hotel information and reservations, visit:  
[www.dearborn.hyatt.com](http://www.dearborn.hyatt.com)

